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TO FLY SILENTLY IN THE NIGHT

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For as long as can be remembered, military and special mission forces who, along with the rest of us, spend half their lives in the night have wanted to be able to see, navigate, and maneuver in dead dark, moving moderate distances silently and invisibly to do assigned tasks. In past wars military dietitians crammed us with carrots to improve night vision while nations and their armies blacked out and camouflaged to conceal vital data from enemy eyes. The mere thought of being able to see 24 hours each day conjures up hundreds of jobs one might do in pitch black that he would otherwise have to leave undone until the next day's light.

. . .

In 1970 a group of CIA officers, combining efforts with the Advanced Research Projects Agency and innovators in the military-industrial arena, made some strides in this area. They developed a quiet helicopter to be flown at night. Now, 15 years later, while the all-around undetectability of special mission aircraft has made some limited progress, not too much else has been done to improve the state of operational night-sight and silence. In effect, the requirement still obtains; special mission forces are still pretty much in the dark, still make noise, and still move not stealthily enough.

The high-tech boom of the 1960s and 1970s left in its train hundreds of gadgets



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* Currently, Directorate of Operations.

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requirements and frustrations remain much the same today—witness our aborted attempt to rescue US national hostages in Iran and our current desire to find means to retaliate meaningfully against those countries and terrorist organizations which continue to attack us around the world.

At the time of the *Pueblo* seizure, our nation's leaders were vocal in their criticism that we had neither created nor were we aggressively working to create a manned infiltration vehicle that, undetected, could enter and exit an enemy country to take an avenging action.

It should be noted here that there is almost always an institutional proclivity on the part of politically minded colleagues who, fearing the consequences of pilot capture by the enemy, again and again push the use of remotely piloted vehicles as a means of performing such missions. Besides being politicians first, such fellows are frequently of the liberal arts variety with only a vague or romantic grasp of the technical complexities involved in any given effort; or, alternatively, wide-eyed scientific types of great aspiration who want desperately to assert the stunning capabilities of then current technical accomplishment.

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Helicopter**SECRET****Quiet Helicopters**

As to silencing the aircraft, the Directorate of Science and Technology had two or three experimental programs in the works, but all were in early stages of development. It was discovered, though, that in response to US Cavalry requests in Vietnam, ARPA and Hughes Tool Company had already launched a program to quiet reconnaissance helicopters. The OH-6 or "Loach" was the bird on which the experiments were being run. Early results showed that the rear rotor bandsaw-like noise could be considerably reduced by adding two blades and reducing rotor speed, while the main rotor flapping noise could be softened by reconfiguring blades and adding a fifth blade. Muffler modifications also could help hold down the noise.

Fe(b)(1) Division officers could work up any great enthusiasm over a helicopter. Authorities consulted in the Pentagon or elsewhere in Washington

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When the idea of using a helicopter rather than a fixed wing aircraft was first broached to CIA management, the reception was cool and confused. The litany of advantages needed recitation. [REDACTED]

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